



# UNITED STATES PATENT AND TRADEMARK OFFICE

*cen*  
UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/708,115	02/10/2004	Yoshinori Iwaizono	28569.7436	2114
20322	7590	01/17/2007		
SNELL & WILMER 400 EAST VAN BUREN ONE ARIZONA CENTER PHOENIX, AZ 85004-2202			EXAMINER BARAN, MARY C	
			ART UNIT 2857	PAPER NUMBER
SHORTENED STATUTORY PERIOD OF RESPONSE		MAIL DATE	DELIVERY MODE	
3 MONTHS		01/17/2007	PAPER	

**Please find below and/or attached an Office communication concerning this application or proceeding.**

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

# Office Action Summary

Application No.

10/708,115

Applicant(s)

IWAIZONO, YOSHINORI

Examiner

Mary Kate B. Baran

Art Unit

2857

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 15 December 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-4 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-4 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 10 February 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                       | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

**DETAILED ACTION**

***Response to Amendment***

1. The action is responsive to the Request for Continued Examination filed on 15 December 2006. Claims 1-4 are pending.

***Claim Rejections - 35 USC § 112***

2. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 1-4 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

Claim 1 recites the limitation, "resistance value detected between two electrically separated patterns." However, it is not clear from the specification or claims what the "pattern" is. The specification describes the pattern as both a tangible object and a detected value. It is not clear how a pattern can simultaneously refer to an electrically separated port or sensor and detected patterned values.

***Claim Rejections - 35 USC § 102***

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1 and 2 are rejected under 35 U.S.C. 102(e) as being anticipated by  
Takano et al. (U.S. Patent No. 6,114,839) (hereinafter Takano).

Referring to claim 1, Takano teaches a secondary battery control circuit (see Takano, Abstract), comprising: a liquid detection section for detecting infiltration or generation of a liquid inside a secondary battery or inside a battery pack in which the secondary battery is installed (see Takano, column 8 lines 1-10 and lines 38-45); and a control section for interrupting charging/discharging of the secondary battery (see Takano, column 8 lines 44-47), wherein the liquid detection section controls the control section based on an impedance or resistance value detected (see Takano, column 3 lines 12-21 and lines 46-58 and column 7 line 66 – column 8 line 10) between two electrically separated patterns (see Takano, column 3 lines 32-45).

Referring to claim 2, Takano teaches a temperature detection section for detecting a temperature of the secondary battery (see Takano, column 8 lines 51-56), wherein the control section controls charging/discharging of the secondary battery based on the temperature detected by the temperature detection section (see Takano, column 8 lines 57-67).

***Claim Rejections - 35 USC § 103***

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 3 and 4 are rejected under 35 U.S.C. 103(a) as being unpatentable over Takano et al. (U.S. Patent No. 6,114,839) (hereinafter Takano) in view of Darmawaskita (U.S. Patent No. 6,184,659).

Takano teaches all the features of the claimed invention except that the secondary battery control circuit is formed on a single semiconductor chip.

Darmawaskita teaches that the secondary battery control circuit is formed on a single semiconductor chip (see Darmawaskita, column 4 lines 25-30).

It would have been obvious at the time the invention was made to one of ordinary skill in the art to modify Takano to include the teachings of Darmawaskita because forming the control circuit on a single chip would have allowed the skilled artisan to easily implement a battery charger design and reduce the component count thereof (see Darmawaskita, column 4 lines 38-41).

Takano teaches all the features of the claimed invention except that the single semiconductor chip is enclosed in a sealing section of the secondary battery.

Darmawaskita teaches that the single semiconductor chip is enclosed in a sealing section of the secondary battery (see Darmawaskita, column 12 lines 38-56).

It would have been obvious at the time the invention was made to one of ordinary skill in the art to modify Takano to include the teachings of Darmawaskita because enclosing the semiconductor chip in a sealing section of the secondary battery would have allowed the skilled artisan to prevent leakage outside of the sealed section.

### ***Response to Arguments***

5. Applicant's arguments filed 5 June 2006 have been fully considered but they are not persuasive.

Applicant argues that Takano does not teach that the liquid detection section controls the control section based on an impedance or resistance value detected; however, Applicant's arguments are not well taken. Takano does teach that a temperature value is detected and used to determine leakage and interrupt charging. This temperature value is measured using a thermistor. Thermistors measure temperature changes and rely on the changes in its resistance with changing temperatures. The temperature signal is therefore a resistance value used to determine the leakage detection (see Takano, column 3 lines 12-21 and lines 46-58). Furthermore, Takano teaches that a leakage is detected using an open (i.e. zero volts) or a short (i.e. not zero volts). Inherently, an open circuit means infinite resistance and a short means no resistance. Therefore, leakage detection via a resistance value is necessarily present (see Takano, column 7 line 66 – column 8 line 10).

Applicant further argues that Takano does not teach "based on impedance or resistance value detected between two electrically separated patterns." However,

Art Unit: 2857

Applicant's arguments are not well taken. As noted above, it is not clear from the specification what the "pattern" is, as the specification describes the pattern as both a tangible object and a detected value. Takano teaches determining a temperature, or resistance between two separate terminals, terminal 2d and terminal 2e (see Takano, column 3 lines 32-45).

### ***Conclusion***

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Mary Kate B. Baran whose telephone number is (571) 272-2211. The examiner can normally be reached on Monday - Friday from 9:00 am to 6:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Marc S. Hoff can be reached on (571) 272-2216. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

5 January 2007



MARC S. HOFF  
SUPERVISORY PATENT EXAMINER  
TECHNOLOGY CENTER 2800